REMARKS/ARGUMENTS

Claims 1-20 remain in this application for further review. Claims 1, 10, 11, 15 and 20 have been amended for clarification purposes. No new matter has been added.

I. Rejection of Claims 1-5 and 8-20 Under 35 U.S.C. 103(a)

Claims 1-5 and 8-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5,450,589 issued to Maebayashi et al. ("Maebayashi") in view of United States Patent No. 6,351,843 issued to Berkley et al. ("Berkley"). Applicants respectfully disagree with the rejections and arguments set forth in the Office Action. There is no suggestion in either of the references that they may be modified as propounded. Moreover, even if for argument purposes such a suggestion did exist, the references fail to teach all the elements of the claims. Nonetheless, in order to clarify the invention and expedite this matter, applicants have made the above amendments for clarification purposes. Independent claim 1 specifically recites at least the following limitations that are not taught or otherwise suggested by the cited references:

> "obtaining ***a platform neutral intermediate representation of the component,*** wherein the intermediate representation ***represents the functionality of the component***"
>
> "***modifying the platform neutral intermediate representation***"
>
> "generating a modified executable code ***based on the modified intermediate representation of the component***"
>
> "inserting the modified executable code into the target system memory ***without taking the target system offline***"

Independent claim 15 specifically recites at least the following limitations that are not taught or otherwise suggested by the cited references:

> "a ***neutral hierarchical intermediate representation*** for a heterogeneous program residing in the system memory, wherein the intermediate representation ***represents a function of the heterogeneous program***"
>
> "a dynamic modification process executing in the processing unit for modifying an executable code in a target system memory ***based on the modified intermediate representation without taking the target system offline***, the executable code ***being platform dependent and associated with the heterogeneous program***"

Independent claim 20 specifically recites at least the following limitations that are not taught or otherwise suggested by the cited references:

> "a transformation process configured to modify ***a platform neutral hierarchical intermediate representation of a heterogeneous program*** executing in a target system memory"
>
> "a dynamic modification process configured to modify an executable code in the target system memory ***based on the modified intermediate representation without taking the target system offline, the executable code being platform dependent and associated with the heterogeneous program***"

The above amendments do not represent new matter. As an example, the specification of the present invention specifically recites as follows:

> "At the end of the creation of the IR hierarchy, all instructions are represented in the hierarchy as IR instructions within code blocks so that there is no differentiation between code written for one platform and code written for a second platform." *Specification*, at p. 11, lines 15-18.
>
> "Once the intermediate representation is complete, the user is allowed to manipulate the code and data (illustrated by the IR transformation module **430**) and to dynamically modify or inject code and data (illustrated by the dynamic modification module **470**) through an application program interface (API) **450**." *Specification*, at p. 11, lines 19-22.

> "The API **450** also permits the user direct access **432** to the IR to navigate through the IR and to make changes, such as moving blocks between procedures, modifying blocks, rearranging the logical connections between blocks, and changing the platform-specific instruction set for a code block." *Specification*, at p. 11, lines 26-29.
>
> "The writer **442** assembles each IR instruction into its platform-dependent counterpart based on the architecture specified in the code block. In an exemplary embodiment in which complex instructions are replaced in the IR, if the complex instruction is being written to the same platform, the writer **442** merely emits the instruction. If the complex instruction is designated to be translated into a different architecture, the writer **442** creates the appropriate set of platform-specific instructions to perform the same function as the original, complex instruction." *Specification*, at p. 12, line 28 - p. 13, line 3.

The portion of the specification cited above is but one example from the specification. These citations are for explanatory purposes only and not meant to impute any limitations into the claims apart from the claim language itself insofar as applicants assert that the terms of the claims are clear.

Applicants can find no teaching or suggestion in the cited references of the above elements. Maebayashi is related to an entirely different invention than the present invention. Maebayashi teaches a modification system wherein older versions of a modification are retrievable when an updating or debugging fails. *Maebayashi*, at col. 1, lines 50-60. One of the problems in the prior art, as set forth by Maebayashi, is that in relatively small-scale data processing systems firmware is written or stored in advance in a ROM. *Maebayashi*, at col. 1, lines 31-37. Therefore, the ROM must be replaced with a new one when the firmware is to be modified or debugged. *Maebayashi*, at col. 1, lines 35-37. Also, if the debugging or modification fails, the ROM must then again be replaced (old versions of a modification cannot be recaptured). *Maebayashi*, at col. 1, lines 44-50.

In order to remedy these problems, Maebayashi teaches a plurality of storage units that maintain various versions of modified and unmodified program data. *Maebayashi*, at col. 1, line 60-col. 3, line 35; col. 4, line 47-col. 5, line 19. These versions are then accessible in case a debugging or update fails and the user needs to revert to a prior version of the program. *Maebayashi*, at col. 4, line 64-col. 5, line 3. Maebayashi is simply teaching storage and retrieval units for various versions of a program to make updating and debugging more user friendly when a failure occurs.

Moreover, applicants cannot find any teaching or suggestion of the above elements in Berkley. Accordingly, applicants assert that independent claims 1, 15 and 20 are clearly allowable over the cited references. Regarding claims 2-5, 8-14 and 16-19 of the present invention, applicants assert that those claims include elements that are not taught or suggested by the cited references. Also, inasmuch as claims 2-5, 8-14 and 16-19 ultimately depend from independent claims 1 and 15, respectively, the same are also thought to be allowable for at least those same reasons.

II. Rejection of Claims 6 and 7 Under 35 U.S.C. 103(a)

Claims 6 and 7 were rejected under 35 U.S.C. 103(a) as being unpatentable over Maebayashi in view of U.S. Patent No. 6,463,583 B1 issued to Hammond ("Hammond"). Applicants respectfully disagree with the rejection. There is no suggestion in any of the references that they may be modified in the manner suggested. Also, even if for argument purposes such a modification could be made, the cited references still fail to teach all the limitations of the claims. Furthermore, the 35 U.S.C. 103(a) rejection of claims 6 and 7 depends

from the above stated 35 U.S.C. 103(a) rejection. The above claims are clearly allowable under 35 U.S.C. 103(a) and therefore, the 35 U.S.C. 103(a) rejection of claims 6 and 7 should be withdrawn.

III. Request for Reconsideration

In view of the foregoing amendments and remarks, all pending claims are believed to be allowable and the application is in condition for allowance. Therefore, a Notice of Allowance is respectfully requested. Should the Examiner have any further issues regarding this application, the Examiner is requested to contact the undersigned attorney for the applicants at the telephone number provided below.

Respectfully submitted,

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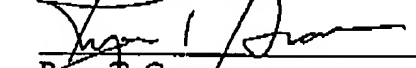

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